WHAT IS CLAIMED IS:

1. A heating element, comprising:

a member having a surface, and a void defined through the member, the void being adapted to allow a fluid to pass through the member;

a conductive coating disposed on at least a portion of the surface of the member; and

at least two electrical connections disposed onto and in electrical contact with, the conductive coating, thus forming at least one heating section;

wherein when electrical power is applied to the connections, heat is generated by the coating and transferred to the fluid passing through the void.

2. The heating element of claim 1, wherein the member comprises a glass quartz tube.

3. The heating element of claim 1, wherein the coating comprises a doped metal oxide.

4. The heating element of claim 3, wherein the coating comprises tin oxide.

5. The heating element of claim 1, wherein the coating is disposed onto the major surface utilizing a rotating fixture.

6. The heating element of claim 1, wherein the coating is disposed onto the major surface utilizing chemical vapor deposition.

7. The heating element of claim 1, wherein the coating is disposed onto the major surface utilizing spray pyrolysis.

8. The heating element of claim 1, wherein the coating has a nominal sheet resistance of about 25 ohms per square.

9. The heating element of claim 1, wherein each connection comprises a compression fitting with wire mesh.

10. The heating element of claim 1, wherein each connection comprises a conductive metal bus bar.

11. The heating element of claim 10, wherein the bus bars comprise ceramic silver frit.

12. The heating element of claim 10, wherein the bus bars comprise sprayed copper.

13. The heating element of claim 12, wherein the sprayed copper is disposed on the conductive coating utilizing a heating head and mask apparatus.

14. The heating element of claim 1, wherein the heat generated is directly proportional to the number of approximately equal resistance heating sections defined thereon.

15. The heating element of claim 1, wherein the connections are in electrical communication with an external power source.

16. A heater assembly, comprising:

an inner member having a major surface;

a conductive coating disposed on at least a portion of the major surface;

at least two connections disposed onto, and in electrical contact with, the conductive coating; and

an outer member having two end portions, wherein each end portion has a cap disposed thereon, and each cap has a major inner member void defined therethrough;

the inner member being positioned therethrough and spaced apart from the outer member, and mechanically attached to and extending through the end cap major inner member voids.

17. The heater assembly of claim 16, wherein the inner member comprises a quartz glass tube.

18. The heater assembly of claim 17, wherein the outer member comprises a quartz glass tube.

19. The heater assembly of claim 16, wherein the end caps comprise frit glass.

20. The heater assembly of claim 16, wherein at least one end cap has a wire void defined therethrough.

21. The heater assembly of claim 16, wherein a vacuum is drawn in the space defined between the inner and outer members.

22. The heater assembly of claim 16, wherein the inner member is partially coated, thereby the heater assembly is capable of heating objects.

23. The heater assembly of claim 16, wherein the assemblage of the inner member, outer member, and end caps is sealed and fired in an annealing oven.

24. The heater assembly of claim 16, wherein the assemblage is sealed with solder frit.

25. The heater assembly of claim 16, wherein sealing the assemblage includes at least one vacuum void disposed in one of the end caps and at least one vacuum grommet to seal and maintain the vacuum at the vacuum void.

26. The heater assembly of claim 16, wherein the inner member and outer member are tubular and concentric.

27. The heater assembly of claim 16, wherein the inner member is non-tubular and the outer member is tubular.

28. The heater assembly of claim 16, wherein the heat produced by the heater assembly is at least partially controlled by a temperature sensor positioned in a fluid stream passing through an axially defined void of the inner member.

29. The heater assembly of claim 16, wherein the heat produced by the heater assembly is at least partially controlled by a temperature sensor on a wall of the outer member.

30. The heater assembly of claim 16, wherein the heat produced by the heater assembly is at least partially controlled by a flow switch in the path of the material that flows through an axially defined void of the inner member.